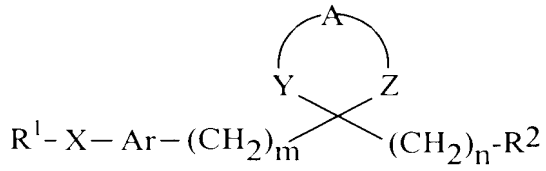
14. (Amended) A method for inhibiting matrix metalloproteinases (MMP) or tumor necrosis factor α (TNF α), the method comprising administering to a patient an effective amount of the compound of Claim 1 or a pharmaceutically acceptable salt thereof.

15. (Amended) A process for manufacturing a medicament, said process comprising contacting the compound of Claim 1 or a pharmaceutically acceptable salt thereof with a pharmaceutically acceptable carrier.

Please add new claims 18-31.

18. (New) A compound of the formula:



(I)

in which R^1 is lower alkyl, halogen, optionally substituted heterocyclic group or optionally substituted aryl,

R^2 is carboxy, protected carboxy or amidated carboxy,

Ar is thienyl,

A is ethylene or trimethylene,

X is oxa or a single bond,

Y is thia, sulfinyl or sulfonyl,

Z is methylene,

m and n are each an integer of 0 to 6, and

$$1 \leqq m+n \leqq 6,$$

and its salt.

19. (New) The compound of claim 18, in which the heterocyclic group of R^1 is selected from the group consisting of:

(1) unsaturated 3- to 8-membered, heteromonocyclic group containing 1 to 4 nitrogen atoms,

(2) saturated 3- to 8-membered, heteromonocyclic group containing 1 to 4 nitrogen atoms,

(3) unsaturated 3- to 8-membered, heteromonocyclic group containing 1 or 2 sulfur atoms,

(4) unsaturated condensed 7- to 13-membered, heterocyclic group containing 1 to 5 nitrogen atoms,

(5) unsaturated 3- to 8-membered, heteromonocyclic group containing 1 or 2 oxygen atoms,

(6) saturated 3- to 8-membered, heteromonocyclic group containing 1 or 2 oxygen atoms,

(7) unsaturated 3- to 8-membered, heteromonocyclic group containing 1 or 2 oxygen atoms and 1 to 3 nitrogen atoms,

(8) unsaturated condensed 7- to 13-membered, heterocyclic group containing 1 or 2 oxygen atoms,

(9) unsaturated condensed 7- to 13-membered, heterocyclic group containing 1 or 2 sulfur atoms,

(10) saturated 3- to 8-membered, heteromonocyclic group containing 1 or 2 oxygen atoms and 1 to 3 nitrogen atoms,

(11) unsaturated condensed 7- to 13-membered, heterocyclic group containing 1 or 2 oxygen atoms and 1 to 3 nitrogen atoms,

(12) unsaturated 3- to 8-membered, heteromonocyclic group containing 1 or 2 sulfur atoms and 1 to 3 nitrogen atoms,

(13) saturated 3- to 8-membered, heteromonocyclic group containing 1 or 2 sulfur atoms and 1 to 3 nitrogen atoms, and

(14) unsaturated condensed 7- to 13-membered, heterocyclic group containing 1 or 2 sulfur atoms and 1 to 3 nitrogen atoms, and

the aryl group of R^1 is C_6-C_{10} aryl, and further,

each of the above-mentioned heterocyclic group and aryl group are optionally substituted by a group selected from the group consisting of:

(A1) halogen,

(A2) lower alkyl,

(A3) lower alkoxy,

(A4) halo(lower)alkyl,

(A5) halo(lower)alkoxy,

(A6) lower alkenyl,

(A7) acyl,

(A8) lower alkylthio, lower alkylsulfinyl, lower alkylsulfonyl,

(A9) C_6-C_{10} aryl,

(A10) halo(C_6-C_{10})aryl,

(A11) hydroxy,

(A12) hydroxy(lower)alkyl, protected hydroxy(lower)alkyl,

(A13) amino,

(A14) carboxy,

(A15) protected carboxy,

(A16) nitro(lower)alkenyl,

(A17) lower alkylenedioxy,

(A18) acylamino,

(A19) nitro,

(A20) (C_6-C_{10})aryl(lower)alkoxy,

(A21) carbamoyl(lower)alkenyl optionally N-substituted by the group consisting of lower alkyl, C_6-C_{10} aryl, lower alkoxy(C_6-C_{10})-aryl, and halo(C_6-C_{10})aryl,

(A22) lower alkylaminocarbonyloxy,

(A23) lower alkanoyloxy,

(A24) lower alkoxy(lower)alkanoyloxy,

(A25) lower alkoxycarbonyloxy,

(A26) lower alkenoyloxy optionally substituted by heterocyclic group of the above (1) to (14),

(A27) lower cycloalkanecarbonyloxy,

(A28) lower alkoxy substituted by the group consisting of carboxy, protected carboxy, lower alkanoyl, lower cycloalkanecarbamoyl, and lower alkylcarbamoyl,

(A29) lower alkylcarbamoyloxy(lower)alkyl,

(A30) lower alkoxycarbonylamino(lower)alkyl,

(A31) amino(lower)alkyl,

(A32) lower alkylcarbamoyl(lower)alkyl,

(A33) heterocyclic-carbonylamino, the heterocyclic group being selected from the above (1) to (14) and optionally being substituted N-protective group,

(A34) the above heterocyclic groups (1) to (14) being optionally substituted by lower alkyl, and

(A35) oxo.

20. (New) The compound of claim 19, in which

R^1 is lower alkyl, halogen, optionally substituted heterocyclic group, or aryl selected from the group consisting of phenyl and naphtyl;

R^2 is carboxy, lower alkoxycarbonyl, hydroxyaminocarbonyl, tetrahydropyranyloxyaminocarbonyl, or phenyl(lower)alkylaminocarbonyl, and

m and n are each an integer of 0 or 1, and m+n=1 or 2,

wherein the heterocyclic group is selected from the group consisting of:

(1) unsaturated 5- or 6-membered heteromonocyclic group containing 1 to 4 nitrogen atoms,

(2) saturated 5- or 6-membered, heteromonocyclic group containing 1 to 4 nitrogen atoms,

(3) unsaturated 5- or 6-membered heteromonocyclic group containing 1 to 2 sulfur atoms,

(4) unsaturated bicyclic 9- or 10-membered, heterocyclic group containing 1 to 5 nitrogen atoms,

(5) unsaturated 5- or 6-membered heteromonocyclic group containing 1 to 2 oxygen atoms,

(6) saturated 5- or 6-membered, heteromonocyclic group containing 1 or 2 oxygen atoms,

(7) unsaturated 5- or 6-membered, heteromonocyclic group containing 1 or 2 oxygen atoms and 1 to 3 nitrogen atoms,

(8) unsaturated bicyclic 9- or 10-membered, heterocyclic group containing 1 or 2 oxygen atoms,

(9) unsaturated bicyclic 9- or 10-membered, heterocyclic group containing 1 or 2 sulfur atoms, or

(10) saturated 5- or 6-membered, heteromonocyclic group containing 1 or 2 oxygen atoms and 1 to 3 nitrogen atoms,

wherein the heterocyclic group being optionally substituted by a group selected from the group consisting of the following (B1) to (B8):

(B1) lower alkanoyl,

(B2) lower alkyl,

(B3) lower alkoxy,

(B4) lower alkoxycarbonylamino,

(B5) carbamoyl or lower alkylcarbamoyl,

(B6) lower alkoxycarbonyl,

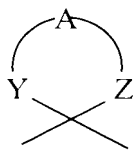
(B7) halo, and

(B8) oxo;

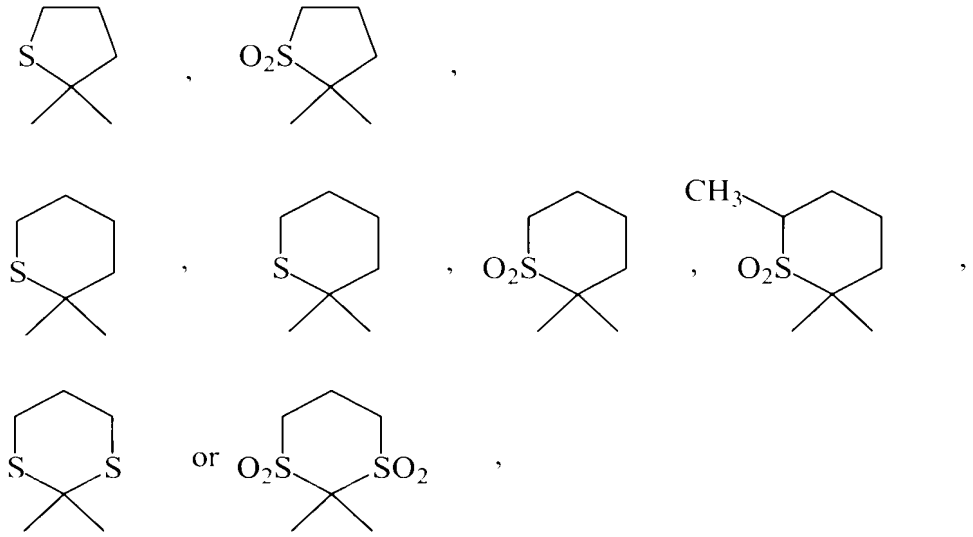
and the aryl is optionally substituted by a group selected from the group consisting of (A1) to (A35) as defined in claim 19.

21. (New) The compound of claim 20, in which

a group of the formula:



is one of the following formulae:



R^1 is lower alkyl, halogen, optionally substituted heterocyclic group or aryl selected from the group consisting of phenyl and naphtyl;

R^2 is carboxy, lower alkoxycarbonyl, hydroxyaminocarbonyl, or tetrahydropyranyloxyaminocarbonyl, and

m and n are each an integer of 0 or 1, and m+n=1 or 2,

wherein the above-mentioned heterocyclic group is

(1) pyrrolyl, pyrrolinyl, imidazolyl, pyrazolyl, pyridyl, pyridyl N-oxide, pyrimidyl, pyrazinyl, pyridazinyl, triazolyl, tetrazolyl, dihydrotriazinyl,

(2) azetidinyl, pyrrolidinyl, imidazolidinyl, piperidinyl, piperidino, pyrazolidinyl, piperazinyl,

(3) thienyl,

(4) indolyl, isoindolyl, indolizinyl, benzimidazolyl, quinolyl, isoquinolyl, tetrahydroisoquinolyl, indazolyl, benzotriazolyl, tetrazolopyridyl, tetrazolopyridazinyl, dihydrotriazolopyridazinyl,

(5) furyl,

(6) oxolanyl,

(7) oxazolyl, isoxazolyl, oxadiazolyl,

(8) benzofuranyl, benzodihydrofuranyl, benzodioxolenyl,

(9) benzothienyl, dihydrobenzothienyl,

(10) morpholinyl, morpholino,

wherein the heterocyclic group being optionally substituted by a group selected from the group consisting of (B1) to (B8) as defined in claim 20,

and the aryl is optionally substituted by a group selected from the group consisting of the following (A1) to (A34):

(A1) halogen,

(A2) lower alkyl,

(A3) lower alkoxy,

(A4) halo(lower)alkyl,

(A5) halo(lower)alkoxy,

(A6) lower alkenyl,

(A7) acyl,

(A8) lower alkylthio, lower alkylsulfinyl, lower alkylsulfonyl,

(A9) C_6-C_{10} aryl

(A10) halo(C_6-C_{10})aryl,

(A11) hydroxy,

(A12) hydroxy(lower)alkyl or protected hydroxy(lower)alkyl,

(A13) amino,

(A14) carboxy,

(A15) protected carboxy,

(A16) nitro(lower)alkenyl,

(A17) lower alkylenedioxy,

(A18) acylamino,

(A19) nitro,

(A20) (C6-C10)aryl(lower)alkoxy,

(A21) carbamoyl(lower)alkenyl optionally N-substituted by the group consisting of lower alkyl, (C_6-C_{10})aryl, lower alkoxy(C_6-C_{10})-aryl, and halo(C_6-C_{10})aryl,

(A22) lower alkylaminocarbonyloxy,

(A23) lower alkanoyloxy,

(A24) lower alkoxy(lower)alkanoyloxy,

(A25) lower alkoxycarbonyloxy,

(A26) lower alkenoyloxy optionally substituted by the above heterocyclic group (1),

(A27) lower cycloalkanecarbonyloxy,

(A28) lower alkoxy substituted by the group consisting of carboxy, protected carboxy, lower alkanoyl, lower cycloalkanecarbamoyl, and lower alkylcarbamoyl,

(A29) lower alkylcarbamoyloxy(lower)alkyl,

(A30) lower alkoxycarbonylamino(lower)alkyl,

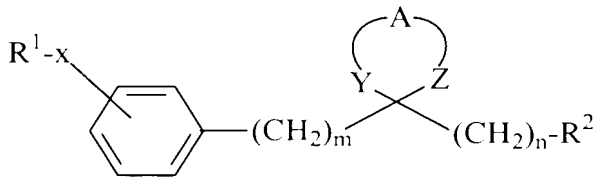
(A31) amino(lower)alkyl,

(A32) lower alkylcarbamoyl(lower)alkyl,

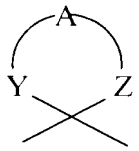
(A33) heterocyclic-carbonylamino, the heterocyclic group being selected from the above (2), (4) and (5) and optionally substituted by N-protective group, and

(A34) the heterocyclic group of the above (7) being optionally substituted by lower alkyl.

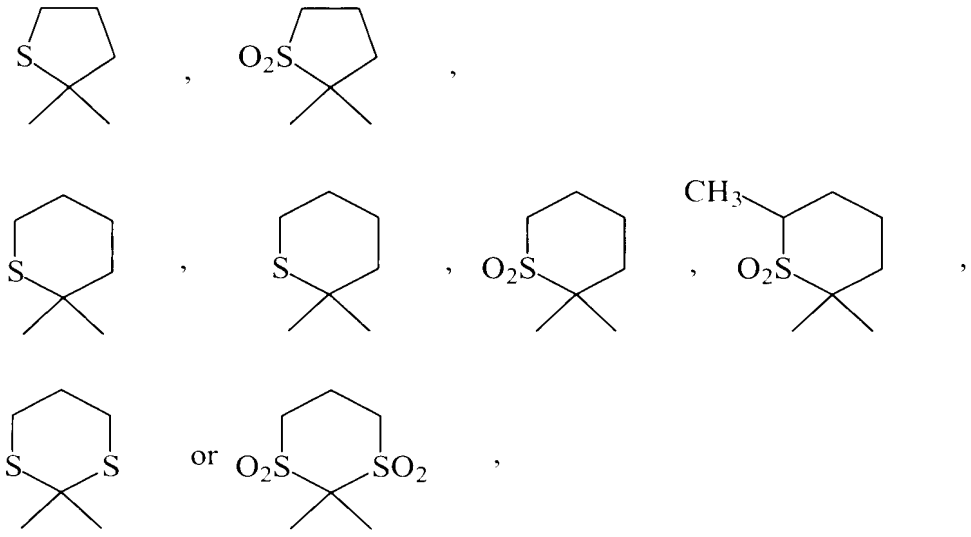
22. (New) The compound of claim 21, having the following formula:



wherein a group of the formula:



is one of the following formulae:

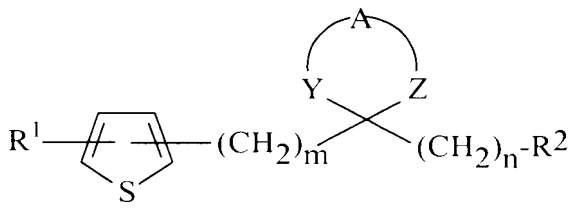


R^1 is lower alkyl, phenyl, halophenyl, or (halo)(phenyl)phenyl,

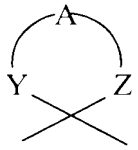
R^2 is carboxy or hydroxyaminocarbonyl, and

m and n are each an integer of 0 or 1, and m+n=1.

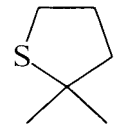
23. (New) The compound of claim 21, having the following formula:



wherein a group of the formula:



is one of the following formulae: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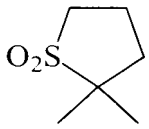
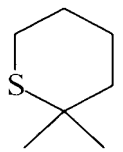

,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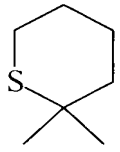
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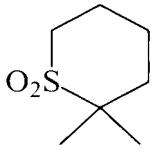
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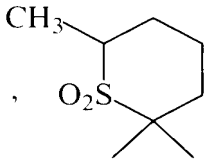
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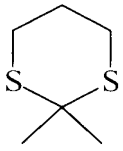
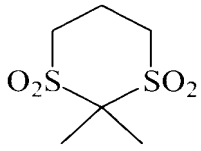

or

,

R^2 is carboxy or hydroxyaminocarbonyl,

m and n are each an integer of 0 or 1, and m+n=1,

R^1 is halogen, heterocyclic group selected from the group consisting of pyridyl, thienyl, furyl, benzofuranyl or benzothienyl, wherein the heterocyclic group is optionally substituted by a group selected from the group consisting of lower alkanoyl, lower alkyl, lower alkoxy, lower alkoxycarbonylamino and lower alkylcarbamoyl; naphtyl or phenyl optionally substituted by a group selected from the group consisting of the following (C1) to (C31):

(C1) halogen,

(C2) lower alkyl,

(C3) lower alkoxy,

(C4) halo(lower)alkyl,

(C5) halo(lower)alkoxy,

(C6) lower alkenyl,

(C7) lower alkylcarbamoyl, carbamoyl, phenyl(lower)alkylcarbamoyl, lower alkanoyl,

(C8) lower alkylthio, lower alkylsulfinyl, lower alkylsulfonyl,

(C9) phenyl, naphthyl,

(C10) halophenyl,

(C11) hydroxy,

(C12) mono- or dihydroxy(lower)alkyl, phenoxycarbonyloxy(lower)alkyl

(C13) amino,

(C14) carboxy,

(C15) lower alkylenedioxy,

(C16) lower alkanoylamino,

phenyl(lower)alkanoylamino, halophenyl(lower)alkanoylamino,

lower alkoxy(lower)alkanoylamino,

phenoxy(lower)alkanoylamino, lower alkoxyphenoxy(lower)alkanoylamino,

lower alkylphenoxy(lower)alkanoylamino,

halophenoxy(lower)alkanoylamino,

carboxy(lower)alkanoylamino, lower alkoxycarbonyl(lower)alkanoylamino,

lower alkylcarbamoyl(lower)alkanoylamino,

halo(lower)alkanoylamino,

lower alkenyl(lower)alkanoylamino,

lower alkoxy(lower)alkanoylamino,

phenyl(lower)alkoxy(lower)alkanoylamino,

piperidinyloxy(lower)alkanoylamino, N-lower alkoxycarbonylpiperidinyloxy-

lower)alkanoylamino, pyridyloxy(lower)alkanoylamino,

hydroxy(lower)alkanoylamino,

lower alkanoyloxy(lower)alkanoylamino,

lower alkylcarbamoyloxy(lower)alkanoylamino, N,N-di(lower

alkyl)carbamoyloxy,

piperidino-carbonyloxy(lower)alkanoylamino,

phenyl(lower)alkylcarbamoyloxy(lower)alkanoylamino, lower

alkoxycarbonylamino(lower)alkanoylamino,

amino(lower)alkanoylamino, fluorenylmethoxycarbonylamino(lower)-

alkanoylamino,

lower alkylamino(lower)alkanoylamino, [N,N-di(lower alkyl)amino](lower)alkanoylamino, [N-lower alkyl-N-(lower alkoxycarbonyl)-amino](lower)alkanoylamino, [N-lower alkyl-N-(fluorenylmethoxycarbonyl)amino](lower)alkanoylamino, [N-lower alkyl-N-(mono- or di(lower)-alkylcarbamoyl)amino](lower)alkanoylamino, [N-(mono- or di(lower alkyl)carbamoyl)amino](lower)alkanoylamino, benzoylamino(lower)alkanoylamino, lower alkanoylamino(lower)alkanoylamino, lower alkanesulfonylamino(lower)alkanoylamino, lower alkoxy(lower)alkanoylamino(lower)alkanoylamino, cyclo(lower)alkyloxycarbonylamino-(lower)alkanoylamino, pyridylcarbonylamino(lower)alkanoylamino, morpholinocarbonylamino(lower)alkanoylamino, phenyl(lower)alkoxyoxycarbonylamino(lower)alkanoylamino, lower alkoxyphenylsulfonylamino(lower)alkanoylamino, hydroxy(lower)alkylamino(lower)alkanoylamino, morpholino(lower)alkanoylamino, oxooxazolidinyl(lower)alkanoylamino, oxopyrrolidinyl(lower)alkanoylamino, trimethylhydantoinyl(lower)alkanoylamino, lower alkenylamino(lower)alkanoylamino, lower alkoxy(lower)alkylamino(lower)alkanoylamino, phenyl(lower)alkylamino(lower)alkanoylamino, pyridyl(lower)alkylamino(lower)alkanoylamino,

lower alkoxycarbonylamino, phenyl(lower)alkoxycarbonylamino,

lower alkoxy(lower)alkoxycarbonylamino,

halo(lower)alkoxycarbonylamino,

amino(lower)alkoxycarbonylamino, phthalimido(lower)alkoxycarbonylamino,

carbamoylamino,

(mono- or di(lower alkyl)carbamoylamino,

naphthylcarbamoylamino,

halophenylcarbamoylamino,

lower alkoxyphenylcarbamoylamino,

lower alkenylcarbamoylamino,

cyclo(lower)alkyl(lower)alkylcarbamoylamino,

phenyl(lower)alkylcarbamoylamino,

halo(lower)alkylcarbamoylamino,

lower alkoxy(lower)alkylcarbamoylamino,

hydroxy(lower)alkylcarbamoylamino, (lower

alkyl)(diphenyl)silyloxy(lower)alkylcarbamoylamino,

carboxy(lower)alkylcarbamoylamino, lower

alkoxycarbonyl(lower)alkylcarbamoylamino,

lower alkylcarbamoyl(lower)alkylcarbamoylamino, or

pyridylcarbamoylamino,

lower alkylsulfonylamino,

lower alkenoylamino,

lower cycloalkanecarbonylamino,

lower alkenyloxycarbonylamino,

phenoxycarbonylamino,

lower alkylthiocarbonylamino,

(C17) phenyl(lower)alkoxy,

(C18) lower alkenyl, mono- or di(lower alkyl)carbamoyl(lower)alkenyl, (2-(methylcarbamoyl)ethenyl, 2-(ethylcarbamoyl)ethenyl, 2-(propylcarbamoyl)ethenyl, 2-(isopropylcarbamoyl)ethenyl, 2-(dimethylcarbamoyl)ethenyl,)

phenylcarbamoyl(lower)alkenyl,

lower alkoxycarbamoyl(lower)alkenyl,

halophenylcarbamoyl(lower)alkenyl,

(C19) lower alkylaminocarbonyloxy,

(C20) lower alkanoyloxy,

(C21) lower alkoxy(lower)alkanoyloxy,

(C22) lower alkoxycarbonyloxy,

(C23) pyridyl(lower)alkenoyloxy

(C24) lower cycloalkanecarbonyloxy,

(C25) carboxy(lower)alkoxy,

lower alkoxycarbonyl(lower)alkoxy,

lower alkanoyl(lower)alkoxy,

lower cycloalkanecarbamoyl(lower)alkoxy,

lower alkylcarbamoyl(lower)alkoxy,

(C26) lower alkylcarbamoyloxy(lower)alkyl,

(C27) lower alkoxycarbonylamino(lower)alkyl,

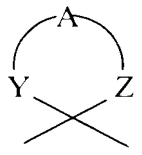
(C28) amino(lower)alkyl,

(C29) lower alkylcarbamoyl(lower)alkyl,

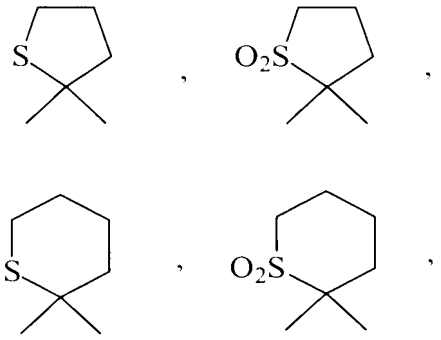
(C30) furylcarbonylamino, teretahydroisoquinolylcarbonylamino, N-lower alkoxycarbonyl-teretahydroisoquinolylcarbonylamino, pyrrolidinylcarbonylamino,

(C31) oxazolyl, lower alkyloxadiazolyl.

24. (New) The compound of claim 23, in which a group of the formula:

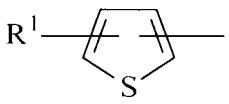


is one of the following formulae:



R^2 is hydroxyaminocarbonyl,

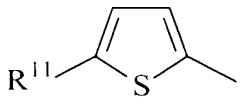
m is 0 and n is 1,



a group of the formula:

is a group selected from the group of the following formulae (a) to (e);

(a)

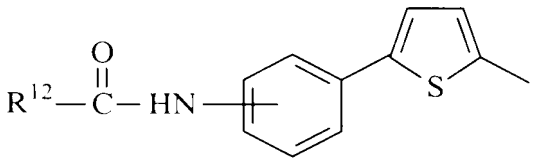


wherein

R^{11} is halo, naphtyl, phenyl, mono- or dihalophenyl, mono- or di(lower)alkylphenyl, lower alkoxyphenyl, trihalo(lower)alkylphenyl, trihalo(lower)alkoxyphenyl, lower alkenylphenyl, lower alkylcarbamoylphenyl, carbamoylphenyl, phenyl(lower)alkylcarbamoylphenyl, lower alkanoylphenyl, lower alkylthiophenyl, lower alkylsulfinylphenyl, lower alkylsulfonylphenyl, phenylphenyl, (halo)(phenyl)phenyl, halophenylphenyl, hydroxyphenyl, mono- or dihydroxy(lower)alkylphenyl, phenoxycarbonyloxy(lower)alkylphenyl, aminophenyl, carboxyphenyl, lower alkylendioxyphenyl, lower alkanesulfonylaminophenyl, lower alkenoylaminophenyl, lower cycloalkanecarbonylaminophenyl, phenyl(lower)alkoxyphenyl, mono- or di(lower alkyl)carbamoyl(lower)alkenylphenyl, phenylcarbamoyl(lower)alkenylphenyl, lower alkoxycarbamoyl(lower)alkenylphenyl, halophenylcarbamoyl(lower)alkenylphenyl, lower alkylcarbamoyloxyphenyl, lower alkanoyloxyphenyl, lower alkoxy(lower)alkanoyloxyphenyl, lower alkoxycarbonyloxyphenyl, pyridyl(lower)alkenoyloxyphenyl, cyclo(lower)alkylcarbonyloxyphenyl, carboxy(lower)alkoxyphenyl, lower

alkoxycarbonyl(lower)alkoxyphenyl, lower alkanoyl(lower)alkoxyphenyl, lower cycloalkanecarbamoyl(lower)alkoxyphenyl, lower alkylcarbamoyl(lower)alkoxyphenyl, lower alkylcarbamoyloxy(lower)alkylphenyl, lower alkoxycarbonylamino(lower)alkylphenyl, amino(lower)alkylphenyl, lower alkylcarbamoyl(lower)alkylphenyl, furylcarbonylaminophenyl, 1,2,3,4-teretahydroisoquinolylcarbonylaminophenyl, N-t-butoxycarbonyl, 1,2,3,4-teretahydroisoquinolylcarbonylaminophenyl, pyrrolidinylcarbonylaminophenyl, oxazolylphenyl, lower alkyloxadiazolylphenyl.

(b)

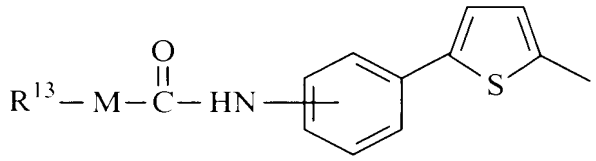


wherein

R^{12} is lower alkyl optionally substituted by the group consisting of phenyl, halophenyl, lower alkoxyphenyl, lower alkoxy, phenoxy, lower alkoxyphenoxy, halophenoxy, lower alkylphenoxy, carboxy, lower alkoxycarbonyl, lower alkylcarbamoyl, halo, lower alkenyloxy, lower alkoxy(lower)alkoxy, phenyl(lower)alkoxy, piperidinyloxy, N-lower alkoxycarbonyl-piperidinyloxy, pyridyloxy, hydroxy, lower alkanoyloxy, mono- or di(lower)alkylcarbamoyloxy, piperidinylcarbonyloxy, pheny(lower)alkylcarbamoyloxy, lower alkoxycarbonylamino, amino,

fluorenylmethoxycarbonylamino, mono- or di(lower)alkylamino, N-lower alkyl-N-(lower alkoxycarbonyl)amino, N-lower alkyl-N-(fluorenylmethoxycarbonyl)amino, N-lower alkyl-N-(mono- or di(lower)alkylcarbamoyl)amino, N-(mono- or di(lower alkyl)carbamoyl)amino, benzoylamino, lower alkanoylamino, lower alkanesulfonylamino, lower alkoxy(lower)alkanoylamino, cyclo(lower)alkyloxycarbonylamino, pyridylcarbonylamino, morpholinocarbonylamino, phenyl(lower)alkoxycarbonylamino, lower alkoxyphenylsulfonylamino, hydroxy(lower)alkylamino, morpholino, oxooxazolidinyl, oxopyrrolidinyl, trimethylhydantoinyl, pyridyl, lower alkenylamino, lower alkoxy(lower)alkylamino, phenyl(lower)alkylamino, pyridyl(lower)alkylamino, and cyclo(lower)alkyl,

(c)



wherein

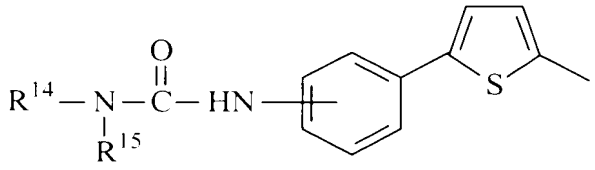
M is oxygen or sulfur,

R^{13} is lower alkyl, phenyl(lower)alkyl,

lower alkoxy(lower)alkyl, halo(lower)alkyl, amino(lower)alkyl, or phthalimido(lower)alkoxycarbonylamino,

lower alkenyl, phenyl,

(d)

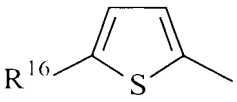


wherein

R^{15} is hydrogen or lower alkyl,

R^{14} is hydrogen, lower alkyl, naphthyl, halophenyl, lower alkoxyphenyl, lower alkenyl, lower cycloalyl(lower)alkyl, phenyl(lower)alkyl, halo(lower)alkyl, lower alkoxy(lower)alkyl, hydroxy(lower)alkyl, (lower alkyl)(diphenyl)silyloxy(lower)alkyl, carboxy(lower)alkyl, lower alkoxycarbonyl(lower)alkyl, lower alkylcarbamoyl(lower)alkyl, or pyridyl,

(e)

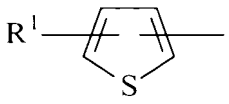


wherein

R^{16} is benzothienyl, benzofuranyl, thienyl, furyl, lower alkylpyridyl, pyridyl, lower alkoxypyridyl, lower alkoxycarbonylaminopyridyl, lower alkanoylthienyl, lower alkylcarbamoylbenzofuranyl.

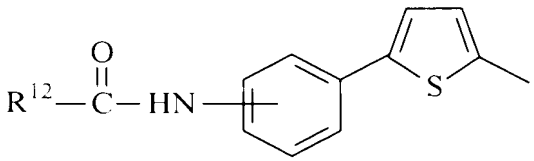
25. (New) The compound of claim 24, wherein

a group of the formula:



is the same group as (a), (c), (d) and (e) of claim 24, and the following formula (b):

(b)



wherein

R^{12} is lower alkyl, phenyl(lower)alkyl, halophenyl(lower)alkyl,

lower alkoxyphenyl(lower)alkyl,

lower alkoxy(lower)alkyl, phenoxy(lower)alkyl, lower

alkoxyphenoxy(lower)alkyl, halophenoxy(lower)alkyl,

lower alkylphenoxy(lower)alkyl, carboxy(lower)alkyl,

lower alkoxycarbonyl(lower)alkyl,

lower alkylcarbamoyl(lower)alkyl, halo(lower)alkyl, lower

alkenyloxy(lower)alkyl, lower alkoxy(lower)alkoxy(lower)alkyl,

phenyl(lower)alkoxy(lower)alkyl, piperidinyloxy(lower)alkyl,

N-t-butoxycarbonylpiperidinyloxy(lower)alkyl, pyridyloxy(lower)alkyl,

hydroxy(lower)alkyl,

lower alkanoyloxy(lower)alkyl,

mono- or di(lower)alkylcarbamoyloxy(lower)alkyl,

piperidinylcarbonyloxy(lower)alkyl,

pheny(lower)alkylcarbamoyloxy(lower)alkyl,

amino(lower)alkyl,

lower alkoxycarbonylamino(lower)alkyl,

fluorenylmethoxycarbonylamino(lower)alkyl,

mono- or di(lower)alkylamino(lower)alkyl,

N-lower alkyl-N-(lower alkoxycarbonyl)amino(lower)alkyl,

N-lower alkyl-N-(fluorenylmethoxycarbonyl)amino-

(lower)alkyl, N-lower alkyl-N-(mono- or di(lower)-

alkylcarbamoyl)amino(lower)alkyl, N-(mono- or di(lower alkyl)carbamoyl)-

amino(lower)alkyl, benzoylamino(lower)alkyl,

lower alkanoylamino(lower)alkyl,

lower alkanesulfonylamino(lower)alkyl,

lower alkoxy(lower)alkanoylamino(lower)alkyl,

cyclo(lower)alkyloxycarbonylamino(lower)alkyl,

pyridylcarbonylamino(lower)alkyl, morpholinocarbonylamino(lower)alkyl,

phenyl(lower)alkoxyoxycarbonylamino(lower)alkyl,

lower alkoxyphenylsulfonylamino(lower)alkyl,

hydroxy(lower)alkylamino(lower)alkyl, morpholino(lower)alkyl,

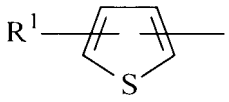
oxooxazolidinyl(lower)alkyl, oxopyrrolidinyl(lower)alkyl,

trimethylhydantoinyl(lower)alkyl, pyridyl(lower)alkyl, lower

alkenylamino(lower)alkyl, lower alkoxy(lower)alkylamino(lower)alkyl,

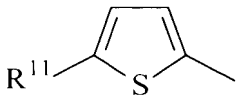
phenyl(lower)alkylamino(lower)alkyl, pyridyl(lower)alkylamino(lower)alkyl, cyclo(lower)alkyl, (amino)(phenyl)(lower)alkylamino, (lower alkoxycarbonylamino)(phenyl)(lower)alkyl, (amino)(lower alkoxy)-(lower)alkyl, (lower alkoxycarbonylamino)(lower alkoxy)(lower)alkyl, (amino)(carboxy)(lower)alkyl, (lower alkoxycarbonylamino)(carboxy)-(lower)alkyl, (amino)(lower alkoxycarbonyl)(lower)alkyl, (lower alkoxycarbonylamino)(lower alkoxycarbonyl)(lower)alkyl, (amino)(phenyl(lower)alkoxy)(lower)alkyl, (lower alkoxycarbonylamino)-(phenyl(lower)alkoxy)(lower)alkyl, (amino)(pyridyl)(lower)alkyl, (lower alkoxycarbonylamino)(pyridyl)(lower)alkyl, (amino)(hydroxy)-(lower)alkyl, (lower alkoxycarbonylamino)(hydroxy)(lower)alkyl, (amino)(amino)(lower)alkyl,
(lower alkoxycarbonylamino)(amino)(lower)alkyl, (amino)(lower alkoxycarbonylamino)(lower)alkyl, (lower alkoxycarbonylamino)(lower alkoxycarbonylamino)(lower)alkyl,
(amino)(lower cycloalkane)(lower)alkyl,
(lower alkoxycarbonylamino)(lower cycloalkane)(lower)alkyl.

26. (New) The compound of claim 24, in which a group of the formula:



is a group selected from the group of the following formula (a) to (e):

(a)



wherein

R^{11} is bromo, 2-naphthyl, phenyl,

3(or 4)-chlorophenyl, 2(or 3 or 4)-fluorophenyl, 3,4-dichloropheny, 3,5-difluorophenyl,

3(or 4)-methylphenyl, 4-ethylphenyl,

4-isopropylphenyl, 4-(t-butyl)phenyl,

3,4-dimethylphenyl, 4-methoxyphenyl,

4-ethoxyphenyl, 4-trifluoromethylphenyl,

4-trifluoromethoxyphenyl, 4-ethenylphenyl,

4-methylcarbamoylphenyl, 4-ethylcarbamoylphenyl, 4-carbamoylphenyl, 4-benzylcarbamoylphenyl,

4-acetylphenyl, 4-methylthiophenyl,

4-ethylthiophenyl, 4-methylsulfinylphenyl,

4-methylsulfonylphenyl, phenylphenyl, 4-phenyl-3-fluorophenyl,

4-(4-fluorophenyl)phenyl, 3(or 4)-hydroxyphenyl, 3(or 4)-hydroxymethylphenyl,

4-(1,2-dihydroxyethyl)phenyl,

4-(phenoxycarbonyloxymethyl)phenyl, 3(or 4)-aminophenyl,

4-carboxyphenyl,

3,4-methylendioxyphenyl,

4-(methanesulfonylamino)phenyl,

3-(2-butenoylamino)phenyl,

3-(cyclopropanecarbonylamino)phenyl,

3-(cyclobutanecarbonylamino)phenyl,

3-(cyclopentanecarbonylamino)phenyl,

4-benzyloxyphenyl,

4-(2-(methylcarbamoyl)ethenyl)phenyl,

4-(2-(ethylcarbamoyl)ethenyl)phenyl,

4-(2-(propylcarbamoyl)ethenyl)phenyl,

4-(2-(isopropylcarbamoyl)ethenyl)phenyl,

4-2-(dimethylcarbamoyl)ethenyl)phenyl,

4-(2-(phenylcarbamoyl)ethenyl)phenyl,

4-(2-(methoxyphenylcarbamoyl)ethenyl)phenyl,

4-(2-(4-fluorophenylcarbamoyl)ethenyl)phenyl,

4-(methylaminocarbonyloxy)phenyl,

4-(ethylaminocarbonyloxy)phenyl,

4-propanoyloxyphenyl, 4-(methoxyacetyloxy)phenyl, 4-

(ethoxycarbonyloxy)phenyl,

4-(3-(3-pyridyl)acryloyloxy)phenyl,

4-(cyclopropylcarbonyloxy)phenyl,

4-(carboxymethoxy)phenyl,

4-(ethoxycarbonylmethoxy)phenyl,

4-(t-butoxycarbonylmethoxy)phenyl,

4-(propanoylmethoxy)phenyl,

4-(cyclopropylcarbamoylmethoxy)phenyl,

3(or 4)-(methylcarbamoylmethoxy)phenyl,

4-(ethylcarbamoylmethoxy)phenyl,

4-(propylcarbamoylmethoxy)phenyl,

3(or 4)-(methylcarbamoyloxymethyl)phenyl,

4-(methoxycarbonylaminomethyl)phenyl,

4-(t-butoxycarbonylaminomethyl)phenyl,

4-aminomethylphenyl,

4-(methylcarbamoylmethyl)phenyl,

3-(2(or 3)-furylcarbonylamino)phenyl,

3-(1,2,3,4-teretahydroisoquinolylcarbonylamino)phenyl,

3-(N-(t-butoxycarbonyl)-1,2,3,4-

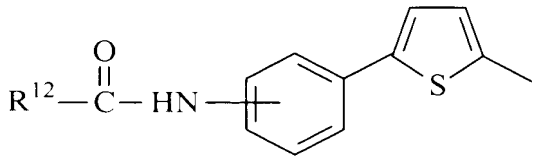
teretahydroisoquinolylcarbonylamino)phenyl,

3-(pyrrolidinylcarbonylamino)phenyl,

4-(1,3-oxazolyl)phenyl,

4-(5-methyl-1,2,4-oxadiazol-3-yl)phenyl,

(b)



wherein

R^{12} is methyl, ethyl, propyl, isopropyl, butyl, isobutyl, t-butyl, neopentyl, phenylmethyl, 4-chlorophenylmethyl, 4-methoxyphenylmethyl, methoxymethyl, ethoxymethyl, propoxymethyl, butoxymethyl, isopropyloxymethyl, 1-methoxyethyl, 2-methoxyethyl, phenoxymethyl, 2-phenoxyethyl, 3(or 4)-methoxyphenoxymethyl, 4-fluoro(or chloro)phenoxymethyl, 3(or 4)-methylphenoxymethyl, 2-carboxyethyl, 2-methoxycarbonylethyl, 2-t-butoxycarbonylethyl, 2-methylcarbamoylethyl, 2-chloroethyl, chloromethyl, allyloxymethyl, (2-ethoxyethoxy)methyl, benzyloxymethyl, 4-piperidinyloxymethyl, (N-t-butoxycarbonyl-4-piperidinyl)oxymethyl, 3(or 4)-pyridyloxymethyl, hydroxymethyl, 2-hydroxyethyl, acetoxymethyl, 1-acetoxyethyl, methylcarbamoyloxymethyl, 1-(N-methyl-N-ethylcarbamoyloxy)methyl, (piperidino-carbonyloxy)methyl, (benzylcarbamoyloxy)methyl, (t-butoxycarbonylamino)methyl, aminomethyl, 1-aminoethyl, 1-(t-butoxycarbonylamino)ethyl, 2-aminoethyl, methoxycarbonylaminomethyl, 2-(methoxycarbonylamino)ethyl, ethoxycarbonylaminomethyl, propoxycarbonylaminomethyl, 1-(fluorenylmethoxycarbonylamino)methyl, 2-(t-butoxycarbonylamino)ethyl, 2-(fluorenylmethoxycarbonylamino)ethyl, 1-aminoisopropyl, 1-aminopropyl,

1-(t-butoxycarbonylamino)propyl,

1-(t-butoxycarbonylamino)isopropyl,

1,5-diaminopentyl, 1,5-bis(t-butoxycarbonylamino)-pentyl,

methylaminomethyl, ethylaminomethyl,

(N-methyl-N-ethylamino)methyl,

dimethylaminomethyl, pentylaminomethyl,

t-butylaminomethyl, methylaminoethyl,

3-(2-(N-methyl-N-methoxycarbonylamino)methyl,

1-(N-methyl-N-t-butoxycarbonylamino)methyl,

1-(N-ethyl-N-t-butoxycarbonylamino)methyl,

2-(N-methyl-N-(fluorenylmethoxycarbonyl)amino)-ethyl, 2-(N-methyl-N-(t-butoxycarbonyl)amino)ethyl, 1-(N-methyl-N-(dimethylcarbamoyl)amino)methyl,

1-(dimethylcarbamoylamino)methyl,

1-(N-(ethylcarbamoyl)amino)methyl,

2-(N-(ethylcarbamoyl)amino)ethyl, benzoylaminomethyl, 2-benzoylaminoethyl, acetylaminomethyl, isobutyrylaminomethyl,

pivaloylaminomethyl,

1-(methanesulfonylamino)methyl,

2-(methanesulfonylamino)ethyl, methoxyacetylaminomethyl,

cyclopentyloxycarbonylaminomethyl,

pyridylcarbonylaminomethyl, morpholinocarbonylaminomethyl,

benzyloxycarbonylaminomethyl,

1-(4-methoxyphenylsulfonylamino)methyl,

1-(2-hydroxyethylamino)methyl,

morpholinomethyl, 1-(2-oxo-1,3-oxazolidin-1-yl)methyl, 1-(2-oxopyrrolidin-1-yl)methyl,

1-(3,4,4-trimethylhydantoin-1-yl)methyl, allylaminomethyl, 1-(2-ethoxyethylamino)methyl,

benzylaminomethyl, 1-(3-pyridylmethylamino)methyl,

2-phenyl-1-aminoethyl, 1-amino-1-phenylmethyl,

1-t-butoxycarbonylamino-1-phenylmethyl,

1-amino-2-phenylethyl, 1-t-butoxycarbonylamino-2-phenylethyl, 1-amino-2-methoxyethyl,

1-t-butoxycarbonylamino-2-methoxyethyl, 1-amino-3-carboxypropyl, 1-t-butoxycarbonylamino-3-carboxypropyl, 1-amino-3-(t-butoxycarbonyl)propyl, 1-t-butoxycarbonylamino-3-t-butoxycarbonylpropyl, etc.), 1-amino-2-benzyloxyethyl,

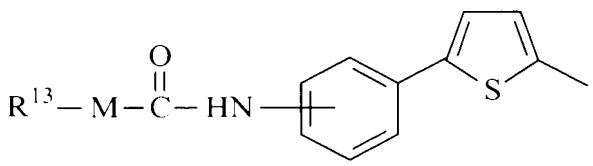
1-t-butoxycarbonylamino-2-benzyloxyaminoethyl,

1-amino-2-(3-pyridyl)ethyl, 1-t-butoxycarbonylamino-2-(3-pyridyl)ethyl, 1-amino-2-(4-pyridyl)ethyl, 1-t-butoxycarbonylamino-2-(4-pyridyl)ethyl, 1-amino-2-hydroxyethyl,

1-t-butoxycarbonylamino-2-hydroxyethyl,

(1,5-diaminopentyl, 1-t-butoxycarbonylamino-5-aminopentyl, 1,5-bis(t-butoxycarbonylamino)pentyl, 1-amino-5-(t-butoxycarbonylamino)pentyl, 1-amino-2-cyclohexylethyl, 1-t-butoxycarbonylamino-2-cyclohexylethyl,

(c)

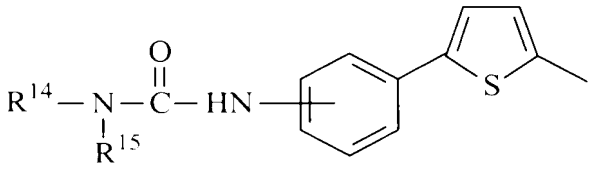


wherein

M=O and R^{13} is methyl, ethyl, propyl, isopropyl, benzyl, 2-methoxyethyl, 2-choloroethyl, 2-aminoethyl, 2-phthalimidoethyl, allyl, phenyl, or

M=S and R^{13} is methyl, ethyl,

(d)



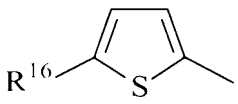
wherein

R^{15} is hydrogen and

R^{14} is hydrogen, methyl, ethyl, propyl, isopropyl, butyl, isobutyl, pentyl, hexyl, 1-naphthyl, 3(or 4)-chlorophenyl, 3-methoxyphenyl, allyl, cyclohexylmethyl, benzyl, 2-chloroethyl, methoxymethyl, 2-methoxyethyl, 2-hydroxyethyl, 2-((t-butyl)(diphenyl)silyloxy)ethyl, carboxymethyl, ethoxycarbonylmethyl, methylcarbamoylmethyl, or 3-pyridyl,

R^{14} is ethyl and R^{15} is methyl,

(e)



wherein

R^{16} is 2-benzothienyl, 2-benzofuranyl, 2(or 3)-thienyl, 2-furyl, 3-pyridyl, 1-methyl-4-pyridyl, 6-methyl-3-pyridyl, 6-methoxy-3-pyridyl, 5-methoxycarbonylamino-3-pyridyl, 5-acetyl-2-thienyl, 2-methylcarbamoyl-5-benzofuranyl.

27. (New) A pharmaceutical composition which comprises the compound of Claim 18 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier or excipient.

28. (New) A process for preparing a pharmaceutical composition which comprises admixing the compound of Claim 18 or a pharmaceutically acceptable salt thereof with a pharmaceutically acceptable carrier or excipient.

29. (New) A method for treating, reducing, arresting, or alleviating matrix metalloproteinases (MMP) or tumor necrosis factor α (TNF α)-mediated disease, the method comprising administering to a patient a therapeutically effective amount of the compound of Claim 18 or a pharmaceutically acceptable salt thereof.

30. (New) A method for inhibiting matrix metalloproteinases (MMP) or tumor necrosis factor α (TNF α), the method comprising administering to a patient an effective amount of the compound of Claim 18 or a pharmaceutically acceptable salt thereof .

31. (New) A process for manufacturing a medicament, said process comprising contacting the compound of Claim 18 or a pharmaceutically acceptable salt thereof with a pharmaceutically acceptable carrier .